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## Original Communications.

### ON THE TREATMENT OF TYPHOID FEVER BY THE RECONSTITUENTS.

[THE following paper is the translation of a pamphlet received from our friend, Dr. S. F. Coues, U.S.N., attached to the war steamer Richmond, now in the Mediterranean. The editor of this Journal being of the same opinion with the translator as to the great value of the memoir, kindly gives it circulation through his pages. It is entitled, *Du traitement de la fièvre typhoïde par les reconstituants. Mémoire presenté a l'Academie Royale des Sciences de Lisbonne. Par le Docteur Lucien Papillaud* (*Henri Almès*). *Lisbonne, Imprimerie de l'Academie.* 1869.]

Thirty years ago, the treatment of typhoid fever consisted mainly in bleedings, blisters, and a severe diet; more recently, purgatives replaced the bleedings, but without changing the diet. While the majority pursued this course, certain attempts at special medication were essayed, either after the practice of Professor Serres with mercurials and principally the black sulphuret of mercury, or after the practice of Professor Chomel with the alkaline chlorides. At present, we have recourse by preference to medicinal and alimentary tonics, and even, in a certain degree, to stimulants. This last change comes from England, and originated in the methods of Graves, of Todd, and of Bennett.

It is proper to recognize, that since the abandonment of bleeding and blistering, the more moderate use of purgatives, and the alimentation and tonification of patients, the mortality of typhoid fever has considerably diminished.

There is yet a medication, which from day to day is taking a larger place in therapeutics, and that is, reconstructive medication. We do not know that it has been as yet formally instituted for the treatment of typhoid fever. Some of the medicaments which form the elements of this medication are, however, often given in the course of that malady, but without system or connection, without co-ordination, and without the bond of a fixed idea or a principle dominating the indications in detail. It is to attain that object that this memoir is written.

We admit, with the English physicians just cited, that whatever phenomena of hypersthenia and phlogosis may exist at the outset of a malady, it must not be lost sight of that, during its course, there always comes a time when such a condition is replaced by hyposthenia and anæmia; to excitement succeeds torpor, to the violence of inflammation succeed depression and weakness. Every affection which would seem to commence in excess of vitality, ends in a want of vital resistance, so that the therapeutic means which may have been directed against the symptoms of the initial period are found to be expressly counterindicated as to those of succeeding periods, and in fact act upon the side of the disease rather than to the advantage of the patient.

However, fever and inflammation itself are no longer considered as symptoms of super-activity; they are but passive phenomena, due to hyposthenia, or to paralysis of the vaso-motor nervous system, and this etiology should exclude all idea of curing them by enfeebling their subject through the subtraction of blood.

Finally, and as a conclusive reason, typhoid fever, being regarded as a miasmatic poisoning, such poisoning should exist partly, at least, in the blood, and it is to heal that altered blood and not to diminish its quantity, that treatment ought to tend.

Does not the treatment by daily purgation also consist in repeated spoliations which enfeeble the patient without palliating the disease? In applying purgative medication to the typhoid pyrexia, we subserve the idea of an elimination of the toxic principle through alvine evacuations. But that is an unproved hypothesis, of which hitherto the demonstration has always failed. Cholera, dysentery (the epidemic form, at least), are they not also toxic and infectious maladies? In these affections, do constant alvine evacuations serve to eliminate the toxic principle? Do they not tend rather to eliminate the patient, who drops off in this incessant melting away of all his tissues and all his organs? And in typhoid fever itself, does there not generally exist an intestinal flux whose persistence, instead of diminishing or abbreviating the disease, is, on the contrary, an unfailing sign of its malignity, and a presage of its fatal termination? For these reasons we think there should be great caution as to the use of purgatives in typhoid pyrexia, and but little good can be expected from their continued use, and from their assumed eliminative action. We would lay down the rule to abstain, in such cases, from all medication which, directly or indirectly, might despoil the organism, by a constant or repetitive action. The spoliation of the organism and the enfeebling of the subject, are they not the effects of every malady? Why in our usual therapeutics should we aid in this spoliation and enfeeblement? Is it not indicated rather to sustain and consolidate, to the extent of possibility, the physical and moral forces of the patient, against the cause which tends to depress and annihilate them?

In the treatment of a disease of limited duration, like typhoid fever, and in the absence of a specific medication, the problem, to our view, consists in making the patient last longer than the disease, which latter, after accomplishing its evolution, becomes extinguished after a delay variable indeed, but having an assured limitation. To endeavor to make the patient survive the disease, that the latter may be left afterwards to be itself cured by gradual extinction, is a very modest programme, which if only it could be realized, would spare us, in a great number of instances, many disappointments and many deceptions. This would not be an aggressive *medicine*, it would not be an attack according to rule, upon the disease, it would be an expectantism assisted by a therapeutic action, yet approaching more closely to hygiene than to therapeutics. Such is the programme of treatment which, in the present state of science, it would seem to be rational to oppose to typhoid fever, and, to carry it out, we conceive nothing to be better adapted than a reconstructive medication.

After these few theoretic considerations, we proceed to the more practical part of our undertaking.

Every disease commences in a germ which is hatched, is developed, and remains longer or shorter stationary, then decreases, and finally disappears. These several periods are marked by the symptoms of incubation, invasion, persistence and decline. There is, then, in the progress of a disease, an order and succession regulated in advance and generally followed. In entering upon treatment, it is always of advantage to begin by deranging this order and breaking up this regularity by means of a disturbing medicament, intended to impress upon the organism a sudden but fleeting shock. We make choice of tartarized antimony to fulfil this indication, and we commence in our method of treatment by giving it either in three or four emetic doses, or else in divided doses, repeated hourly during an entire day. After this preliminary and preparatory medication, we commence upon the treatment by the reconstituents.

The title of reconstituents is given to many therapeutic agents, but it seems to us that those which possess this quality incontestably in the highest degree are mineral waters, iron, arsenic and quinine.

Taking into view the pale, yellowish and earthy tinge, which is always observed, at the most critical period of their disease in the subjects of typhoid fever, and the alteration of the blood of which that tinge is the most certain index, we have conceived the idea of submitting the persons so affected to the influence of a ferruginous mineral water. This medication aims to prevent or to diminish as much as possible the lesion of the sanguineous fluid, by putting the organism under the influence of iron, which is pre-eminently the reparative of the blood, and by giving this medicament as mineral water, the form in which it is best tolerated, producing at once, with the smallest doses, the most considerable effects. But it would seem, moreover, that we should take into account one of the most important elements of the typhoid pyrexia, its bronchial catarrh, so distressing, so fatiguing, so persistent, and so remarkably exhaustive of the strength of the patient. Bronchial catarrh, which gets as far sometimes as broncho-pneumonia, is an almost constant symptom in this affection, for we have found it in a degree more or less pronounced in nearly nine-tenths of our cases. If the catarrhal phase of typhoid has not been forgotten in nosographical descriptions, it is almost passed over in silence in the therapeutic indications. We may well be astonished at this omission, for lesions of the respiratory passages are quite as important as those of the digestive passages, and a medication which could advantageously modify the former might be of as great value in the final result as that intended to cicatrize the ulcerations of

Peyer's patches. Is it objected that the lesions of the intestinal follicles are constant, while the bronchial lesions may be wanting? Such an objection is of little force, for in reality, in observing pulmonary catarrh in nine tenths of cases, whatever their termination, we authenticate it more often than we do the anatomical alterations of the intestine, which can only be verified in fatal cases, happily constituting the smallest proportion.

Bronchial catarrh appears, then, entitled to have a part in the medication of typhoid fever, and we meet it with the sulphurated mineral waters. Among these we prefer the *Eaux de Bonnes*, which in France are rightly held to be the best tolerated, the lightest, the most digestible, and the most assimilable. Our medication consists in making the patient drink, in proportion to his thirst, and without fixed dose, alternately a ferruginous and a sulphurated water, either plain or moderately sweetened; prescribing at the same time an alimentation regulated to the appetite of the subject, and consisting of bouillon, soup, milk, and even meat and wine, when inappetency does not repulse them.

When we first began to practise this treatment, it was, in the first instances, only at a very advanced period of the disease, and after the employment of other means persistently fruitless. We saw under its influence the color of health gradually restored, while, at the same time, the cough diminished in frequency and intensity. Expectoration became easier and gradually dried up. Evidently, sanguification had been favorably affected by the ferruginous water, at the same time that the sulphurated water exercised its elective and medicative influence upon the pulmonary mucous tissue. Such excellent results bound us to employ this treatment from the outset of the disease, and before the appearance of the symptoms whose modification was had in view. We would act thus with the intention of preventing, or at least of diminishing the sanguineous alteration and the catarrhal invasion. This result was attained in a great majority of cases, and we had the satisfaction of seeing the patients subjected to the use of ferruginous and sulphurated waters preserve a coloring of the complexion approaching that of health, and to have to suffer only a deferred and moderate catarrh, and even to be completely exempt. Besides, with these patients, the appetite, strength and condition were relatively preserved—all the symptoms of the affection were remarkably lessened, and its entire duration generally limited to twenty days. Most of the subjects noticed that the ingestion of the mineral waters was followed by a sensation of comfort, and that whenever, by accident, they happened to be deprived of them, their suspension had the same effect as a deprivation of food. The mineral waters are not only special remedies addressed to this or that morbid manifestation, according as it occupies this or that organ; more than any other of the reconstituents do they stimulate innervation and nutrition, and thus restore the strength, and repair the organic and dynamic losses caused by the disease. When a quality is so constantly seen to be the attribute of nearly all the mineral waters, so diverse in their composition and therapeutic properties, we are tempted to divine its cause in a substance distributed throughout nearly all of them, and which does not require to be found in large proportion, to play an active part in them: that substance is arsenic.

This arsenical mineralization, which formerly was not suspected, and which has been besides urged to the discredit of some thermal establishment, is found in nearly all waters where analysis has sought for it. For many years it has been authenticated in eighty-two sources, and it is evident that these figures of arsenical sources must yet increase as research extends in that direction. The carbonated ferruginous waters, especially, are almost all arsenical. Arsenic is an admirable adjuvant of iron, and nature gives us by the almost constant association of these two substances in her mineral waters, a lesson from which, hitherto, therapeusis has but little profited.

We had thus combined an arsenical water with the ferruginous water, and were therefore encouraged to administer directly and separately certain officinal or magistral arsenical preparations, whose doses might be adapted to the end in view. This was done, varying the doses from two milligrammes to one centigramme, and it appeared to us that this remedy most happily influenced the disease in general, diminishing the intensity of the febrile movement, correcting the departure from innervation known as ataxia, aiding the resolution of passive and hyposthenic congestions, and finally, in an appreciable degree, sustaining nutrition.

The notion of pathogenic fermentation, regarded as the cause of infectious diseases, is becoming more and more general. The remarkable works of an Italian physician, Professor Polli, have demonstrated the neutralizing action of the sulphites and hypo-sulphites upon pathologic fermentation, as the recent observations of Professor Barbosa, of Lisbon, have proved the efficacy of sublimated sulphur upon the parasitic productions of diphtheria. This will aid in the interpretation of the good effects of sulphurated waters in admitting the antiseptic action of their sulphites, and it might also partly explain, by an analogous action, the parasiticide action upon micro-zoaires, and micro-phytes, the efficacy of arsenical medication. These explanations do not rest upon hypothetical interpretations, they are founded upon properties perfectly demonstrated, and upon numerous and rigorously observed facts.

It may possibly be objected to the treatment of typhoid fever by mineral waters, that these waters bottled are articles of luxury, that is, of high cost, and beyond the reach of poor patients. In fact, it would be impossible to employ such an expensive medication with the poor, especially as their use should always be prolonged. Under such circumstances, where some substitute for high-priced remedies must be found, and even improvised, we have endeavored to make up as far as possible for what could not be got, and have had both the ferruginous and the sulphurated waters prepared artificially by the most simple processes. The first was done by putting fragments of old rusted iron in a vessel filled with water, and renewed as fast as consumed. The second was done in a like manner with a ball of sulphur broken into fragments of the size of a hazel-nut, and put into a vessel filled with water, and renewed as above.

Patients are advised to drink as they may happen to be thirsty, even rather more than what a moderate thirst would require, alternating the waters, allowing no other drink. The iron water, thus prepared, contains, it is seen, a minimum proportion of carbonate of iron in solution, derived from the carbonic acid of the atmosphere, and an appreciable portion of the same salt and of the oxide which remains suspended. This is a common and much used remedy. As to the sulphur water, the use of which is much less general and which is perhaps a remedy peculiarly our own (for we have never seen it ordered by our teachers, or our brethren, nor indicated in books), it soon acquires a decided sulphurous odor and taste, from which we infer that it ought to possess, to a certain degree, most of the properties of the natural sulphur waters.

With patients making use of these artificial waters, there is observed, as with those using the natural waters, a manifest reconstituent action, but less energetic, less prompt, and less complete than in the latter. The disease and the convalescence were of longer duration, the restoration of strength and appetite were longer delayed, but, in the end, the results were nearly the same. These differences may be understood from the fact that the artificial iron and sulphur water are very imperfect medicaments compared with the natural waters, which, notwithstanding our knowledge of their chemical elements, are practically secret remedies whose mystery analysis cannot entirely reveal.

In the second stage of the disease, when the indication to recuperate the strength is still more decided, we are accustomed to add to the reconstituents just enumerated, a more positive tonic, the wine of quinine and gentian in doses of three spoonfuls a day. We would extend its use far beyond the extinction of the febrile movement and up to an almost complete return to the normal conditions of health.

Finally, to complement the treatment now detailed, an external remedy may be added to the internal medication, rather hygienic than medicinal, consisting of daily lotions with cold water, over the whole cutaneous surface if possible, or at least over the dorsal region, which in the position of the decubitus sustains the weight of the body and the heat of the bed. These lotions should be effected by means of a large sponge, previously soaked with fresh water and squeezed, passed rapidly and frequently over the skin without wetting the linen or the bed. They serve the double end of cleanliness and of a sedative to cutaneous calorification.

Alimentation should be adjusted to appetite and taste. We are more often required to meet and overcome a want of appetite than to repress its intemperance. We have slight faith in the relapses and deaths attributed to indigestion. We have never seen one in a practice now of twenty-nine years, and during which we have uniformly permitted alimentation to our patients.

Such is the treatment with which for more than eleven years we have combated typhoid fever, and with which in an aggregate of about eighty cases we have lost but three patients, who from circumstances which need not be stated here were not submitted like the others to medication by mineral waters.

The treatment is not entirely new, for which we are thankful; if it were found to be composed only of innovations, it would reasonably excite distrust not only in others but in ourselves. In fact, experience cannot be unique in practical medicine; it is a common fund which belongs to all, and to which each personality brings its tribute. It is in this view that we have endeavored to bring our own to the special therapeutics of typhoid fever, by introducing into it the medication by the sulphurated and ferruginous mineral waters, a medication which we take the liberty of recommending to our brethren, with a profound conviction of its great value.

[The author adds to the memoir—"If the Royal Academy of Sciences of Lisbon condescends to receive favorably this first effort, we propose to complete it by a second memoir, which will contain our observations, and the reflections which their study has suggested."]

## THE ABUSE OF THE ALIMENTARY CANAL.

(Concluded from page 124.)

We will now pass to a consideration of some of the reasons why this long-established custom should be abandoned, and endeavor to state clearly certain objections to the general use of the so-called expectorants in the treatment of cough.

And, first, I wish to insist upon an obvious want of analogy between these remedies and those belonging to some other classes. From what is known of the properties of some articles of the materia medica, it is not difficult to define the conditions of their utility, to name the morbid states for which they are, properly speaking, remedies, and to predict, with tolerable correctness, the results which will follow from their use. For instance, if the stomach or bowels be embarrassed by their contents, it would be very natural to expect that benefit would be derived from the action of an evacuant, emetic or cathartic. It is perfectly easy and logical to suppose that stimulants will improve an enfeebled circulation; that narcotics, as producing stupor, can relieve pain; that astringents will control certain hæmorrhages, and favorably modify the circulation, and change the condition of tissues in certain inflammations of the mucous membranes; that alkalies may correct secretions unnaturally acid; that cool applications will reduce excessive heat in any part to which they can be applied; that diaphoretics will restore the suppressed secretion of a dry skin. Absolute rest is an obvious method of diminishing the discomforts of an inflamed joint; and utter darkness at once suggests itself as the only means of at once relieving a photophobia produced by any cause.

If we accept the common definition of expectorants as a fair and just statement and description of the characteristics of certain drugs, and if we at the same time remember the nature of cough and recall the numerous and diverse causes which may produce it, I feel very sure that, looking at the subject from a theoretical point of view, no one would believe for an instant that, in the majority of cases, expectorants would possess the slightest value in the treatment of this symptom. For a certainty, antimony will not, except at the price of serious exhaustion, arrest a cough originating in a nervous condition, nor one depending upon organic disease outside of the thoracic cavity. Can it be supposed that senega will relieve a cough produced by an elongated uvula, by a laryngitis, or by a commencing pleurisy? Can sanguinaria be expected to diminish a cough which is associated with gangrene of the lungs? And surely no one would believe, *a priori*, that squills or ipecac could be employed, with any prospect of benefit, against a cough of which a tubercular deposit was the cause. Yet consumptives have undoubtedly swallowed expectorants *secundum artem* in immeasurable quantities for the very laudable purpose, though by a mistaken method, of removing that symptom which in their estimation constitutes the totality of their disease. Let any man of average candor and discernment carefully analyze the facts which I have presented; it seems impossible that he should arrive at any other conclusion than that expectorants are not likely to influence any other than a cough resulting from a simple bronchitis, acute or chronic.

Regarding expectorants in their relation to cough, the presumption would be that they would aggravate it by reason of the necessity arising for the expulsion of a secretion increased in quantity, not to speak of the morbid quality of the product of a diseased surface. Moreover, it would not always be prudent to run the risk of adding to a profuse bronchial secretion which, in the extremes of age, may be a cause of serious embarrassment. It is difficult to believe that expectorants are endowed with any direct or specific power to relieve the air-passages of their contents. It would seem that they must accomplish it, if at all, either by exciting cough, or through an emetic influence, by means of a sudden, forcible and continued contraction of the thoracic parietes, producing what may be called pectoral vomiting.

Secondly, I wish to urge upon your attention the fact that inasmuch as expectorants have a strong and decided tendency to excite nausea, impair appetite, retard digestion, and to interfere with proper assimilation, they obstruct the normal action of the alimentary canal, they divert it from its all-important uses, they abuse it; hence, when they are resorted to for remedial ends it is in direct contradiction and violation of the most advanced general therapeutic idea of the present day, which is the principle of treatment by nutrition; treatment by methods designed to maintain in a state of the highest possible healthy activity all functions which subserve that process. Although this principle has of late received its most distinct enunciation, it is not altogether new; for Abernethy, more than abreast of his time, in his remarks upon the constitutional treatment of local diseases, insists with particular emphasis upon the value of carefully regulating the condition of the digestive organs.

The modern formula for disease declares it to be a negative condition; a state of deficiency in which some of the elements of health are wanting, and in which the vital force is more or less diminished, and may be reduced down to the point of complete extinction. In disease, the processes of life are embarrassed, feeble and imperfect. Convalescence involves something more than a mere maintenance of the even balance between assimilation and waste as they exist in health: it implies an energetic exercise of the recuperative power; a restoration of lost force; a recovery of lost ground; it is a process of reconstruction and renewal, which imposes an unusual tax upon the nutritive forces. How can any good be derived from measures which, in their nature and operation, are not in accordance with these facts? In disgraceful defiance of them, is the indiscriminate and frequent use of expectorants.

Now let us look at this thing in a somewhat different way, and endeavor, by invoking the aid of a mathematical expression, to offer something approaching to a demonstration of the point under consideration. What determines recovery in any case whatever; what establishes the chances for or against it? Making the most general statement possible, it may be said that the chance of recovery (R) is proportional, directly to tenacity of life, or amount of vitality (V), and inversely to intensity of disease (D). (And by intensity of disease I mean something more than mere severity of symptoms.) If we render the foregoing statement as concise as possible by reducing it to the form of a mathematical expression, we have—$R=\frac{V}{D}$; the value of R being represented by a fraction, and depending upon the proportion between two elements, which are variable, according to the circumstances of each case.

The ultimate object of medical treatment is to avert or diminish the dangers of disease; to increase to a maximum the chances of recovery. We seek to attain these ends, in part, by the use of drugs, which are not powerless or inactive, and which, to accomplish the purpose intended, must either sustain and increase the vital forces, or they must abate the intensity of disease. Obviously, R is to be made larger by adding to V, or subtracting from D. Lessening V is equivalent to making an addition to D, and inevitably reduces the value of R. It is plain that the advantage gained in any case is not proportional to the diminution of D, if that diminution is effected by measures which, at the same time, depreciate the value of V. Expectorants are not inert—they exert an influence; and the question now comes up, are they more likely to affect the numerator or the denominator of the fraction by means of which we state the chance of recovery? Partly in view of the considerations already offered, and partly in anticipation of what I hope to establish under the next head, I shall venture to assert that, as a general rule, expectorants cannot be expected to decrease the intensity of disease, and that they inevitably tend to impair and waste the forces which maintain and prolong life. Hence the absolute impropriety of their use. And, on the other hand, a most careful and assiduous course of tonic and stimulating treatment is imperatively demanded in all those cases in which cough is an alarming symptom, as helping to indicate serious organic disease.

Thirdly, direct experience constantly proves the inefficacy of expectorants, and shows the superiority of other modes of treatment. In this connection we will confine ourselves to the consideration of bronchitis, a disease for which it would seem that expectorants ought to be used with advantage, if they ever have any value. Nothing of any importance is proved by the fact that squills and ipecac are from the outset regularly administered, in approved doses, to a man who gets rid of an acute bronchitis within twelve or fourteen days. The disease is self-limited, and would soon disappear spontaneously. The processes of disease and medication are going on simultaneously, and a sequence could easily be mistaken for a consequence; the former simply relating to the order of events in time, the latter involving the connection between cause and effect. The only thing established beyond every possible doubt by the fact of a recovery in an acute medical case is, that the patient has not been prevented from getting well by the kind of treatment pursued. So that we must turn to those cases in which the tendency to recovery is insufficient for the purpose, and the disease becomes a chronic one, and hence may be taken as a fair test of the propriety and value of any particular course of treatment. I have repeatedly seen cases which certainly required the aid of a physician's care, and in which expectorants had been thoroughly and persistently used, in large doses and in small ones, but without producing any other effect than, primarily, a gastric derangement, and, secondarily, a reduction of flesh, strength and color, together with a continuation of the disease, which has steadily and successfully improved under a different plan of treatment. Frequently, in former days, I have endeavored in vain by the use of expectorants to modify and relieve the hard, dry, incessant, tiresome cough which habitually attends bronchitis in some individuals. In other words, expectorants utterly fail to exert a remedial influence just in those cases in which it is most needed; and more than this, they are worse than useless, because by their debilitating effects they antagonize and defeat the very object we seek to accomplish. Such are the conclusions which my observation compels me to accept.

Fourthly, the testimony of patients, which is an indirect experience, helps to confirm my belief in the correctness of these conclusions. I often meet people in whom slight causes provoke cough, depending probably upon a sub-acute bronchitis, and disposed to be persistent. They tell me that they have so constantly had recourse to the ordinary cough medicines without any benefit, that their faith in them has now become completely disestablished. By the continued study of their own cases, they are persuaded that for them such a system of medication is worthless.

Fifthly, it may be suggested that some systematic writers seem to doubt whether the class of expectorants should be recognized as such. In a somewhat old-fashioned book, entitled Bigelow's Sequel, certain properties are positively affirmed of emetics, cathartics, caustics, narcotics, &c.; but with an obvious reservation, it is said that expectorants "are supposed to promote the secretion from the mucous membrane of the lungs." And it is to be borne in mind that this book bears the date of a time in which medical faith was firmer than now, and medical scepticism, if it existed at all, had none of the boldness and assurance which have since distinguished it. Quite as much to the point is the following quotation from an editorial note to a work upon Materia Medica, published some years since. "The author admits that there are no expectorants which act directly or specifically, and concedes that no medicinal agents are more uncertain in their effects than those arranged under this class." Again, "if there be any form of medication worthy of confidence as directly expectorant, it is not to be found in the introduction of any drug into the stomach."

In his allusion to those who "are never easy until they can get every patient upon a regular course of something nasty or noxious," Dr. Holmes must have had in mind the believers in expectorants. The double epithet admirably fits the class of medicines under consideration.

Venesection has fallen into general disuse; emetics and cathartics are administered with a more sparing hand than formerly; and if it has not already been done, it is quite time for physicians to seriously inquire whether it would not be better to forever abandon the use of expectorants in the treatment of pulmonary affections. And with this, as with all other questions to which our attention may be turned, let it be remembered that the obligations of the whole body bind each one of its members. Let our Profession recognize and study its weakness, and then it may justly claim to know its strength. Let it confess the errors it has committed, and it shall secure increased respect and confidence. Let it make an honest acknowledgment of what it cannot do, and its short-comings shall disappoint none; its greatest benefits will be conferred, and they will be received with grateful satisfaction. Let it resolve to swear blindly in the words of no master; let it discreetly exercise the right of doubting, and faithfully discharge the duty of thinking, and, more than ever, progress shall be its characteristic.

# Hospital Reports.

## BOSTON CITY HOSPITAL.

Surgical Cases in the Service of Dr. George Derby. Reported by Mr. Geo. B. Stevens, House-Surgeon.

### *Five Cases of Extensive Injury to the Hands.*

Case I.—The patient, æt. 17, was thrown from a wagon, striking against a curb-stone. The integument of the right hand was extensively lacerated on the ulnar side, with a compound fracture of the fifth metacarpal bone, on the dorsum, and at the commissures of the fingers; the muscles of the ball of the thumb were much torn; a clean cut wound extended across the wrist from the ball of the thumb to the styloid process of the ulna. The left humerus was fractured just above the condyles.

Sutures were used in the wounds, and the hand laid on a flat splint padded with oakum. For the fracture of the humerus an internal angular splint and a cap splint over the shoulder were used.

During the three weeks following, the sloughs separated and healthy granulations showed themselves. Then erysipelas appeared; the discharge diminished, the granulations became pale and flabby, and much constitutional disturbance manifested itself. The erysipelas disappeared at the end of four days, only to reappear again in a week. Recovering from this he had no further drawback. The splints were removed from the left arm at the end of four weeks, when the union was firm. A baggy condition of the palm of the right hand with much gluing of the tendons remained for some time after the ulcers had all healed, but persistence in the use of the flexors had enabled the patient when he left the house to very nearly close the fingers in the form of a fist.

Case II.—The patient, æt. 8, caught his left hand in machinery. A compound fracture of the first metacarpal bone was produced, with a lacerated wound of the radial side of the index finger, deep laceration of the muscles of the ball of the thumb and of the muscular fold between the thumb and index finger.

The edges of the wounds were brought together with sutures and adhesive plaster, the latter being also used to keep the thumb close to the radial side of the fore finger. Hand laid in oakum soaked with an aqueous solution of carbolic acid.

The wounds closed rapidly and with very little suppuration, so that in three weeks he left with them quite healed. The motions of the thumb and index finger were nearly perfect.

Case III.—The patient, æt. 7, had both hands caught in the block of a pulley. All the fingers of the right hand were crushed, and the integument on both dorsum and palm torn back as far as the ball of the thumb. The thumb itself was uninjured. The ends of the thumb and of the second and third fingers on the left hand were torn off.

Before the patient was brought to the hospital, a surgeon had removed the crushed fingers on the right hand. Some further trimming of the torn tissue was required, and the heads of the last four metacarpal bones were removed with bone forceps. Flaps hardly existed but in name. On the left hand, the last and the head of the middle phalanx were removed from the thumb, and from the second and third fingers; the flaps remaining were scanty and ragged. Cold-water dressing was used upon both hands.

After the removal of the sutures, the wounds were dressed with carbolic acid and castor oil, in the proportion of ʒi. of the former to ℥viij. of the latter. The flaps, such as they were, sloughed on both hands, but healthy granulating surfaces were left. On the tenth day, pus was evacuated at the lower third of the right fore-arm. Following this, granulation and contraction progressed satisfactorily.

Four weeks after the accident, the patient was still in the hospital. The granulating surface on the right hand was much contracted; movements of the thumb were nearly perfect. On the left hand, the cut ends of the fingers had cicatrized, and the power of flexion of the stumps was very considerable. The stump of the thumb had nearly closed, and its motions, except that of flexion, were unimpaired.

Cases IV. and V.—Two boys, each aged about 15, the one an Hibernian, the other a Swede, within forty-eight hours of each other, in widely different parts of the city, met with very nearly the same injury from machinery.

The former had all the fingers, except the little finger on the right hand, crushed, and more than half of the last phalanx of the thumb torn off. On arriving at the hospital, the fragments of the thumb and fingers were removed—the head of the fourth metacarpal bone being cut off with bone-forceps, while with the index and middle fingers separation was made at the metacarpo-phalangeal articulation. There were no flaps. The wound was dressed with carbolic acid and castor oil, one part of the former to sixty-four of the latter.

Irritative fever followed, but was of short duration. In a week's time the patient was able to sit up with his hand on a straight splint. There was not one untoward symptom; the wound granulated rapidly. The dressing used at the time of entrance was continued until the last ten days, when the exuberant granulations were strapped. At the end of five weeks the granulating surface was very much contracted, and the patient left the house to be treated as an out patient. The cut end of the thumb had cicatrized, and the thumb itself was freely movable. Aside from a slight contraction of the flexor of the little finger, the motions of the finger were free in any direction.

The Swedish boy had all the fingers of the right hand very much crushed, the thumb itself being uninjured. When brought to the hospital the fingers were hanging by very slight muscular attachments; the second, third and fourth metacarpal bones were fractured; the back and the ulnar side of the hand were much lacerated. The fragments of the fingers and the heads of the last four metacarpal bones were removed. The flaps were pretty abundant, but ragged. But few sutures were used. The wound was dressed with carbolic acid and castor oil, one part to sixty-four.

The fever which followed was inconsiderable. On the fifth day hæmorrhage began from the wound, ceasing, however, spontaneously. On the following day the hæmorrhage was quite alarming, but ceased upon the wound being slit open and exposed to the air. Following the secondary hæmorrhage granulation went on without interruption for three weeks, when erysipelas set in, lasting about a week; a poultice was substituted for the carbolic acid and oil. After the subsidence of the erysipelas healthy granulations reappeared in the wound. The poultice was omitted, and simple cerate used as a dressing. The wound contracted somewhat slowly, but still surely. Six weeks after the accident the patient was still in the hospital, with the wound quite healed except a small portion at the centre, near the site of the heads of the third and fourth metacarpal bones. Motions of the thumb were but little impaired.

*Slough of Scrotum following the Palliative Operation for Hydrocele.*—The patient, aged 58, had hydrocele on the right side for many years, and had been tapped about twenty times. When he entered the hospital, one week after the last tapping, which was done at one of the city charitable institutions, the scrotum was very much enlarged, the integument of the upper half thickened and reddened, while the integument of the lower half had been entirely removed, leaving the testes covered only with thin membranous tunics, in a sloughing, disorganized condition. Posteriorly was an opening from which offensive pus exuded. In the upper portion of the scrotum on the right side, just below the external ring, was a hard tumor, consisting apparently of the testis and epididymis much enlarged. The patient was anæmic and much debilitated, and had apparently suffered much from privation and lack of proper food. He was ordered wine, tincture of the chloride of iron, and the most nourishing food; the scrotum to be dressed with carbolic acid and castor oil, in the proportion of ʒj. of the former to ℥viij. of the latter, and to rest upon a pile of oakum soaked in an aqueous solution of carbolic acid.

During the following ten days the sloughs in the lower part of the scrotum separated, laying bare the testes covered with healthy granulations; the enlarged testis and epididymis diminished in size; the general condition of the patient improved wonderfully. The dressing ordered at entrance was discontinued, and the extensive ulceration strapped with adhesive plaster. Granulation and contraction beneath the strapping went on at first rapidly, then more slowly, but still surely, until at the end of a month the ulcer had nearly closed. The testes were somewhat atrophied. The operation, which was done as a palliative, has doubtless effected a radical cure of the hydrocele.

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To Cool Water.—In order to cool water by evaporation, it has long been the practice in warm countries to wrap a pitcher or other vessel containing the water with a wet cloth, the evaporation from which served to reduce the temperature of the vessel and consequently of its contents. An English manufacturing firm have applied the same principle in a portable refrigerator. The inner vessel for holding the liquid or substance to be cooled is surrounded by an outer one containing water, and closed at the top by a layer of porous textile material. This latter draws up the water by capillary attraction, and the water, evaporating from the upper surface, produces the requisite reduction of temperature.—*Druggist's Circular*.

Medical and Surgical Journal.

Boston: Thursday, September 23, 1869.

### APOTHECARIES AND PRESCRIPTIONS.

Mr. Editor,—In view of the fact that we have many careless, incompetent, —— —— ——[*] apothecaries in our midst, into whose hands our prescriptions are liable to fall, will it not be well for the Suffolk District Medical Society, at its next meeting, to take some action towards preventing prescriptions from being compounded or prepared by incompetent dispensers of medicine? It seems to the writer that the welfare of our patients, as well as our own reputation, demands it. I will suggest the following plan:—Let a committee of six or more physicians be appointed, whose duty it shall be to make inquiries of every regular physician in the District in regard to what he knows concerning the competency, habits, &c., of any of the apothecaries, or their assistants, doing business within the limits of the Suffolk District. Let them also visit, *incognito* or otherwise, every apothecary store, especially the doubtful ones, and learn what they can from observation.

When this has been accomplished, let the Society issue, for the use of its members, prescription blanks, on the back of which are printed the names and location of shop of all such as are believed by the committee to be reliable. Then physicians can instruct their patients to obtain medicines of those whose names may be found on the prescription paper.

If the above or any better plan can be instituted we believe much benefit will arise from it. What think you, Mr. Editor?

I.

We are not quite sure that the action which our correspondent recommends is the wisest which can be taken in the premises. The public adoption of certain pharmacists as reliable dispensers of our prescriptions might possibly be considered as the formation of a "black list" consisting of all those retail druggists who should be excluded from among the faithful. Such a course might prove objectionable from a legal point of view; it might also work injustice in some instances. But, that some action is loudly called for in the matter, we are fully persuaded. We think the Suffolk District Medical Society, too, should promptly take the matter in hand, and appoint a committee to examine it and report upon the best method of procedure. We consider, however, that such committee should be instructed to confer *in limine* with the Massachusetts College of Pharmacy, and advise with them as to the course to be pursued. That association is full of zeal for mutual improvement, and for the elevation of the standard of pharmacy, and we are confident would rejoice to render us in every way all the aid in their power. Very effectual would be that aid.

The evil of incompetence among apothecaries is a crying one, and we are not disposed to believe it confined to this city. The difficulty and uncertainty of medicine are great enough without having them increased, without having the very foundations of medication undermined, by careless and ignorant dispensers of drugs which have been carelessly selected. To write for the *unguentum hydrargyri nitratis* and have an article put up so loosely flung together that your patient's eyelid is excoriated by free nitric acid, is not precisely agreeable to the sufferer or satisfactory to the physician. Or to prescribe calomel and find your sick man put to sleep forever with corrosive sublimate, does not smooth the pillow of the practitioner. To send for ipecac to relieve an overloaded stomach, with its attendant distress or perhaps convulsions, and be furnished with Indian meal, is to meet with "something in the wrong place." These instances are simply suggestive of hundreds analogous in character which have actually occurred. We have in mind a line of street—not a hundred miles from Boston—some three fourths of a mile in length, well studded with "apothecary shops"; and which yet, in the opinion of one well qualified to judge, does not offer a single establishment of the kind fit to send a prescription to. Whether or not there be much choice for the public between the patent medicines retailed by these dealers, or the doses they compound, it would be perhaps not perfectly easy to decide.

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[*] Our correspondent here uses a stronger expression.

All this tends to point the argument we adduced some weeks since, to the effect that pharmacy should be re-adopted into, and made a specialty of general medicine, while its votaries are sifted, their numbers reduced, their compensation raised, their obligations, privileges and *esprit de corps* blended with those of the parent profession. But, in the meanwhile, since this reform would necessarily require time for its accomplishment, other measures are demanded to save our patients from imposition and danger—ourselves from mortification and obloquy. Let the Suffolk District Medical Society take the initiative, as above proposed.

Another and temporary expedient we would humbly suggest—simple, but as far as it would go, effectual. A case, of the size of a surgeon's dressing case, will contain a dozen bottles of the capacity used for the homœopathic pellets of sugar of milk, and may have a pocket at the side for powders. It will hold an ample supply of the drugs needed for emergencies, or cases demanding prompt action; *e. g.*, it will carry pills of opium, of morphine, and of purgative materials; powders of sulphate of zinc, of calomel and jalap, of ipecac, &c. When there is time to spare, the request may be made that other prescriptions may be presented to certain designated pharmacists—a request, however, too often unheeded. But we think, in the present condition of things, every physician should be provided with the pocket-case, and should have it filled only by a reliable pharmacist.

It would be most unjust, however, to close these brief remarks, without referring to a kindred topic which touches ourselves. Do we write our prescriptions as we should? If any one thinks there can be but one answer to this question—as there ought to be—let him go and look over the prescriptions filed at any apothecary's. Often indistinct, sometimes *nearly illegible*, are the words he will constantly see in his mind's eye, as he looks over those collections of amorphous bits of paper. We hope, if such a committee should ever be appointed as our correspondent solicits, they will take this grievance in hand and report upon it on the same page which deals with the delinquencies of apothecaries. The preparation of prescriptions calls for as much care from the physician who indites, as from the druggist who puts them up. We were tempted to say that as much forethought should be used in arranging these autographs of great men and little, as if they were blanks for death-warrants, which instruments in cases of error they are liable to become. As the lead pencil is mostly used (and is perhaps for the most part the best thing for the purpose), in writing "the recipe," paper with a suitable surface for taking readily the traces of the plumbago, should be kept in the pocket of the practitioner as regularly as the pencil itself. And, next to accuracy, distinctness should be the constant aim of the writer, just as perspicuity is made a cardinal canon of rhetoric. Furthermore, we hold that students of Materia Medica should be systematically trained by their teachers in the art of prescribing, it being made a *sine qua non* that they write prescriptions so clearly that he who runs may read.

Finally, as mistakes will sometimes occur in the hands of the most careful dispensers, to be entirely eliminated only when human imperfection disappears, so errors occasionally get into the prescriptions of the wisest, the most cautious and most distinguished medical men. That these errors have many of them been detected by the pharmacist's keenness, and the physician apprized of them in season to make his correction without the knowledge of his patient, we desire to avow, and to offer therefor those thanks *which have been sometimes neglected*. One of our most skilful and painstaking pharmacists suggests that the dose be always appended to the recipe, as that course, by attracting a second time the attention of both prescriber and dispenser to the quantity of medicine ordered, operates as a check upon the mistakes of either party. It would be well if the name of the physician were also subscribed, to enable the apothecary to confer with him in cases of doubt.

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**Transfusion.**—This operation has again attracted attention. M. Garnier, in the *Union Médicale*, says that while some resort to it only as the *ultima ratio*, others make it an ordinary remedy, almost exempt from danger; and even go so far as to recommend it as a preventive measure. Transfusion, he says, means at the present day the injection of blood deprived of its fibrin and filtered. Dr. Albanese he quotes as reporting six cases—two women and four men. In three cases of anæmia followed by hæmorrhage, the patients got well. But, in three others, in whom there was purulent infection, tuberculosis, or septicæmia, the patients died, not of the operation, but of their disease—a result in no wise astonishing. The wonder is that transfusion was done under such circumstances. M. Landois, who, says the writer, has most recently, among the Germans, occupied himself with this subject, has attempted some statistics of transfusion, with the following results, viz. :—

| | *Cases.* | *Recoveries.* | *Deaths.* | *Results unknown.* |
|---|---|---|---|---|
| Acute anæmia | 97 | 63 | 31 | 3 |
| Acute toxic affections, [such as purulent infection, &c.] | 10 | 3 | 7 | |
| Other diseases, | 38 | 9 | 20 | 9 |
| | 145 | 75 | 58 | 12 |

Dr. Gesellius, of St. Petersburg, proposes in transfusion to take blood not defibrinated and still oxygenated. To avoid opening an artery to obtain it, he suggests tapping the capillary system of the skin. The apparatus is to consist essentially of a cupping-glass, a scarificator, an air-pump, a tube, a trochar, &c.

Obituary.—Dr. Solomon D. Townsend, of this city, died on Sunday afternoon, after an illness of about 24 hours, at the age of 76 years. Dr. Townsend graduated at Harvard College in 1811, and was a classmate of the Hon. Edward Everett. He entered the naval service of the United States as surgeon, and in that capacity spent three years of his life. He was for many years one of the attending surgeons of the Massachusetts General Hospital, and at the time of his decease was one of the consulting surgeons to that institution. He was also President of the Board of Directors of the Mass. Charitable Eye and Ear Infirmary.

Obituary.—Dr. Francis C. Ropes, a promising and esteemed member of the medical profession of this city, died on Wednesday last at the age of 31 years. He had been occasionally troubled with some serious symptoms for a considerable time previous; but the fatal result was not threatened till within a comparatively short time before his death. He had Bright's disease, complicated at the close with pneumonia. He graduated from Harvard College in 1858, and was one of the Surgeons of the Boston City Hospital.

Death from Chloroform.—Mrs. Emily Banker, wife of John S. Banker, of Hart's Falls, died suddenly at the house of Dr. Z. Cotton, of that place, while under the influence of chloroform, administered for the purpose of extracting her teeth. The doctor, assisted by his brother, administered chloroform in the usual way, and extracted three teeth. The patient came out all right. He gave her a second inhalation, and extracted nearly all the remaining teeth. This time she rallied, and showed no signs of distress. There being two stumps remaining, she insisted on taking it again, and inhaled the third time. Having extracted the remaining teeth, he noticed that respiration had nearly if not quite ceased. He threw her forward to let the blood run out of her mouth, and, finding no symptoms of returning life, laid her on the floor and attempted artificial respiration, but it was of no avail. Coroner Kennedy was summoned next morning, and a jury empanelled. Drs. James Nelson and O. M. Bump were called in, and gave an opinion that death had ensued by asthenia of the heart from the use of chloroform. The jury rendered a verdict that Mrs. Banker died from the use of chloroform, for the purpose of extracting teeth, and that it was judiciously and properly administered, and that no blame can attach to Dr. Cotton. It might be stated, in addition, that her family physician had advised her that it would be safe, as far as he knew, for her to take chloroform."—*Cambridge* (*N. Y.*) *Post*, and *Dental Cosmos*.

At the recent meeting of the British Medical Association, the address in midwifery was given by Dr. Beatty, of Dublin. He reviewed the history of midwifery, and staked out, as it were, the ground which it was the business of the modern accoucheur to occupy. Confining himself then to a review of some of the modern improvements in the practice of midwifery proper, he dwelt upon the advantages which had accrued from the use of anæsthetics, of which chloroform was the most conspicuous, and expressed his opinion of the benefits which have followed its employment in natural, difficult, and instrumental labor, the only ill-effect of it apparently being that it tended to favor *post-partum* hæmorrhage. The greatest applause was elicited when he uttered a strong denunciation of the doctrines which recently found expression in the Dialectical Society, and of the audacity of those who invoked the co-operation of a respectable Profession in their base endeavor to place a limit upon the increase of families.—*Medical Times and Gazette.*

HUMAN REMAINS IN GLACIERS.—We have recently obtained a specimen, lately deposited by Dr. John W. Ogle in the Museum of St. George's Hospital, of considerable interest. It consists of the thumb of a man, supposed to be one of the guides lost in the year 1820 in making an ascent of Mont Blanc, which was brought to light more than forty years afterwards. The preparation is the gift of J. Snowden, Esq., a barrister of the Temple, who writes the following description of its discovery. He says:—"In the year 1862 I was crossing the Glacier des Bossons, near Chamounix, and found protruding from the ice a man's arm; the flesh was quite firm and white, the thumb in question was lying severed just outside the hole, and just beneath the surface of the ice I found several finger-nails, hair, part of a leathern knapsack, a cork, &c. The arm was pretty confidently identified as having belonged to Fairraz, one of the guides who was swept away forty years before at the top of the glacier whilst making the ascent of Mont Blanc with Dr. Hamel. The appearance of fragments of their bodies was not unexpected, as Dr. Forbes, from his calculations as to the movement of the glacier, had predicted that portions of the remains would probably be found in that very year."—*Ibid.*

ELECTROLYTIC CURE OF A MALIGNANT TUMOR.—Dr. W. Neftel reports in the *Medical Record* a case of cancer apparently permanently cured by electrolysis. The patient, a gentleman aged 58, was operated upon by Dr. Sims for a carcinomatous tumor in the left mammary region last year. Soon after the operation the axillary glands of the same side became enlarged, and were removed by the same surgeon. Shortly afterwards, a new scirrhous tumor appeared in the right mammary region, and speedily attained the size of an orange. Further extirpation being clearly contraindicated, Dr. Neftel proposed electrolytic treatment, expecting therefrom merely local benefit. He says:— * * * * *

A month after the first sitting the tumor was found a great deal softer and smaller; at the end of the second month it had almost disappeared, and a fortnight later no trace of it remained. The general condition of the patient is now in all respects excellent, and new deposits can nowhere be detected."—*Medical Gazette.*

HEALTH OF THE EMPEROR OF THE FRENCH.—Several of our correspondents in Paris allude to the rumors respecting the health of the Emperor, but they differ widely in their opinions.

The Emperor has stone, says one, and will not let Nélaton crush it, as he was unsuccessful in the case of Niel, and His Majesty is very superstitious. Another says the Emperor suffers from gravel, causing him much pain in the loins, and once or twice hæmaturia. The emperor is not very ill, declares a third; he has lumbago and other rheumatic pains, and has for years been subject to piles.

Our readers will readily understand these varying rumors as arising from such symptoms as could not be concealed, but are common to each proffered explanation. We may allude to a more probable conjecture by one who avers that none of the papers know anything about it, but believes that the official contradictions as to the Emperor's danger may be reconciled with what is known of the treatment pursued, by the supposition that an enlarged prostate is the cause of the trouble. This would not be unlikely, considering the advancing age of the Emperor, and would not imply danger. On the other hand, the Emperor suffered from gravel several years ago. Those in attendance give no information whatever, so that it is impossible for newspaper correspondents to give more than rumor and conjecture.—*Medical Press and Circular.*

FEMALE MEDICAL STUDENTS IN PARIS—FRENCH METHOD OF DRESSING WOUNDS.—The Paris correspondent of the *London Medical Times and Gazette* says:—

We too, here in Paris, have two women studying medicine—one a yankee lady from Massachusetts, the other a Russian, I believe.

Whenever physicians with a foreign diploma wish to pass their examinations so as to receive the degree of Doctor of the Paris Faculty, a demand must be made to the school, whence, if accepted, it passes to the Minister of Public Instruction for approval. The first application of this kind made by one of these women to the Faculty was energetically and unanimously refused. But this did no good; the Minister overruled the Faculty and decided otherwise. How encouraging it must be to the lovers of women's rights to witness, for instance, as I have, one of these ladies by the side of a patient in the hospital suffering from stricture of the urethra, and the *interne* asking her to pass the catheter! This is elevating woman!

I had the pleasure of meeting Professor Pirrie, of Aberdeen University, here a few days ago. The Professor expressed great astonishment at the manner in which the French dress wounds. He had witnessed an amputation of the thigh the day previous at the Charité, and the surgeon, instead of attempting union by first intention, had stuffed the wound, down to the bone, with lint and cotton.

This is a practice which, I believe, astonishes every one coming to Paris. Yet, in answer to the question, "Why do you not try union by first intention?" we are told by all, "Impossible! Accidents (*i.e.* pyæmia) are sure to follow."

In order, however, to show Professor Pirrie some surgery more in conformity with English views, I invited him to accompany me the following day to see the hospital tents which M. Lefort, Surgeon to the Cochin Hospital, has had constructed. Wounds here were differently treated, and looked different. No other dressings than cold water, or this and alcohol or carbolic acid, are used—no fatty substances, no salves, no ointments, no healing bandages. There is a sponge for every patient, and the greatest cleanliness is observed. Thanks to these precautions, the Cochin Hospital—not only the tents—has had less accidents than any other in Paris, and for the last two years, since M. Lefort has had charge of the surgical wards, not a single case of erysipelas has occurred.

The largest tent, of which at some future day I may send a description, contains eighteen beds. These tents are a great step onwards, and I think a year or two will prove why pyæmia is so prevalent in our hospitals.

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ERYSIPELAS AFTER VACCINATION.—J. Harmar Smith, M.R.C.S., L.S.A., in a letter to the Editor of the London *Medical Times and Gazette*, writes as follows:—

A case occurred under my own observation many years ago confirmatory of the judgment of Dr. Ballard, expressed in the letter which you published on Saturday, that it by no means follows in cases in which erysipelas succeeds vaccination that it is the fault of the vaccinifer. In this instance, which occurred in Sheffield when I was a public vaccinator there, the child was a year old, stout and florid, and was vaccinated on August 12, 1850. The vaccination was successful, and there was nothing peculiar about the case, until on the ninth day I noticed that the areola was larger and more inflamed than usual. When I saw the child again, on the day but one after, there was phlegmonous erysipelas extending to the elbow. The inflammation then rapidly spread till it had covered the greater part of the body, and the patient died on August 30, or the eighteenth day of vaccination. Several other children were vaccinated successfully at the same time, with the same lancet and from the same child, but the disease in each of them was perfectly normal and uncomplicated.

I saw no other case of erysipelas following vaccination, but the late Mr. Reedal, then in extensive private practice in Sheffield, afterwards told me that he had several cases of erysipelas following vaccination about the same time as mine (all of which, however, recovered), from which I inferred at the time that there was present what has been called "an epidemic constitution of the atmosphere."

There is a case of erysipelas after vaccination quoted in the *Medical Times and Gazette* of July 20th, 1861, from the *Gazette Hebdomadaire*, as having been related at the Société de Chirurgie. The remarks cited by you from the discussion which followed are, I think, worth reproducing at the present time:—"M. Robert and various other members expressed their opinion that the chances of consecutive inflammatory accidents would be diminished if much larger intervals were left between the punctures than is generally the case. M. Giraldés, agreeing in this precept, still thought that more importance should be attached to the condition of the health of vaccinated infants; for in the Children's Hospital, the inmates of which manifest great morbid aptitudes, phlegmonous erysipelas is not rare, even after the most carefully executed vaccinations."

I may mention, in connection with the case which I have related, that whilst I was a public vaccinator to the Sheffield Union I vaccinated, on a rough estimate, about 10,000 children; but the above-mentioned was the only case in which I had reason to believe that erysipelas or any other disease resulted from the vaccination.

**SELF-CONSTITUTED TREATMENT OF LUNATICS.**—It is so notorious that patients afflicted with insanity are so much better cared for in asylums provided for the purpose, that it seems strange that in this age of enlightenment there should be found persons so misguided as to attempt to treat such cases in their own homes. We have, however, good reason to believe that much of this is being done, and we are reminded by a recent melancholy case of suicide that more stringent measures are needed to prevent the practice. The case in point is that of a lunatic who was confined for some time in the home of one of his relatives, but who escaped one night, and was found drowned in a neighboring pond in the morning. It would be hard to judge which was the most insane of the two, the self-constituted keeper or the poor unfortunate patient.—*N. Y. Medical Record.*

**HEAT FROM THE MOON.**—A long-vexed question—one which astronomers and physicists have labored and puzzled and even quarrelled over for two centuries at least—has at length been set at rest. Whether the moon really sends us any appreciable amount of warmth has long been a moot point. The most delicate experiments had been tried to determine the matter. De Saussure thought he had succeeded in obtaining heat from the moon, but it was shown that he had been gathering heat from his own instruments. Melloni tried the experiment, and fell into a similar error. Piazzi Smyth, in his famous Teneriffe expedition, tried the effect of seeking for lunar heat above those lower and more moisture-laden atmospheric strata which are known to cut off the obscure heat-rays so effectually. Yet he also failed. Professor Tyndall, in his now classical "Lectures on Heat," says that all such experiments must inevitably fail, since the heat rays from the moon must be of such a character that the glass converging-lens used by the experimenters would cut off the whole of the lunar heat. He himself tried the experiment with metallic mirrors, but the thick London air prevented his succeeding.

The hint was not lost, however. It was decided that mirrors, and not lenses, were the proper weapons for carrying on the attack. Now, there is one mirror in existence which excels all others in light-gathering, and therefore necessarily in heat-gathering, power. The gigantic mirror of the Rosse telescope has long been engaged in gathering the faint rays from those distant stellar cloudlets which are strewn over the celestial vault. * * * *

At enormous cost, and after many difficulties had been encountered, the Rosse reflector has at length had its powers more than doubled, by the addition of the long-wanted power of self-motion. And among the first-fruits of the labor thus bestowed upon it, is the solution of the famous problem of determining the moon's heat.

The delicate heat-measurer, known as the thermopile, was used in this work, as in Mr. Huggins's experiments for estimating the heat we receive from the stars. The moon's heat, concentrated by the great mirror, was suffered to fall upon the face of the thermopile, and the indications of the needle were carefully watched. A small but obvious deflection in the direction signifying heat was at once observed, and when the observation had been repeated several times with the same result no doubt could remain. We actually receive an appreciable proportion of our warmth-supply from "the chaste beams of the wat'ry moon." The view which Sir John Herschel had long since formed on the behavior of the fleecy clouds of a summer night under the moon's influence was shown to be as correct as almost all the guesses have been which the two Herschels have ever made.

And one of the most interesting of the results which have followed from the inquiry confirms in an equally striking manner another guess which Sir John Herschel had made. By comparing the heat received from the moon with that obtained from several terrestrial sources, Lord Rosse has been led to the conclusion that at the time of full moon the surface of our satellite is raised to a temperature exceeding by more than 280° (Fahrenheit) that of boiling water. Sir John Herschel long since asserted that this must be so. During the long lunar day, lasting some 300 of our hours, the sun's rays are poured without intermission upon the lunar surface. No clouds temper the heat, no atmosphere even serves to interpose any resistance to the continual down-pour of the fierce solar rays. And for about the space of three of our days the sun hangs suspended close to the zenith of the lunar sky, so that if there were inhabitants on our unfortunate satellite, they would be scorched for more than seventy consecutive hours by an almost vertical sun. * * * —*Spectator*.

## Medical Miscellany.

**Large Hypertrophy of the Breasts.**—In the clinical records of the Jervis-Street Hospital, Dublin, published in the *Medical Press and Circular*, is a report of a case of enormous hypertrophy of the breasts, necessitating removal of one organ; the operation followed by the reduction in size of the remaining breast. The patient, aged 20, an unmarried girl, of delicate appearance, was admitted into Jervis-Street Hospital under the care of Dr. McSwiney, on April 7th, 1869, suffering from enormous enlargement of both breasts.

She had always menstruated regularly, and enjoyed good health, but had scarcely any development of the mammary glands until about a year before her admission into hospital. The breasts then suddenly began to grow large, her changes meantime occurring regularly, and her general health remaining good. About six months after the first commencement of their growth, the breasts became so large as to cause her much inconvenience, owing to their great size and weight.

When admitted, the breasts were found greatly enlarged, elongated and dependent; their surface was smooth and regular; the nipples were scarcely visible; and careful examination revealed that there was evidently present a simple hypertrophy of the mammary glands. The patient was in a very exhausted condition from the constant dragging and weight of these enormous masses, which were so large as to interfere with her activity, and prevent a healthy amount of exercise. She had previously been under the care of several hospital surgeons, who had not succeeded in affording her relief, and the hypertrophy continued to increase.

**Bleaching Sponges.**—The white sponges seen on the stands of our street peddlers, are bleached in the following manner:—The softest, finest specimens are selected, and the sand removed from the cavities by shaking; they are then washed in hot water, and, after squeezing out the water, are placed in a bath of dilute hydrochloric acid, and allowed to remain for half an hour. They are then taken out, and, after another washing in hot water, are placed in a fresh bath of the dilute acid, to which has been added six per cent. of dissolved hyposulphite of soda, and there allowed to remain twenty-four hours. The sponge is finished by washing in water, and drying.—*Medical Record.*

**New Property of Gun-Cotton.**—According to the *Chemical News*, it is possible to burn gun-cotton in the palm of the hand without the least danger; a delicate balance, in the pan of which gun-cotton is exploded, does not swing from its poise. The same quantity of gun-cotton, if it be pressed into a cavity, explodes with a force equal to that of nitro-glycerine, and ten times greater than that of gunpowder, provided it be ignited by percussion, in the same way as nitro-glycerine.—*Druggist's Circular.*

**A death** from chloroform is reported in Pittsburg, in the practice of Dr. John Dickson. The patient was about to submit to amputation of the leg, but died about one minute after the anæsthetic was administered.—*Med. and Surg. Reporter.*

**Notice.**—A translation made by us from the *Gazette Hebdomadaire* and headed "Cholera *versus* Cleanliness," is copied word for word by a New York Journal and no credit given. Likewise "sundry small items not charged."

## MEDICAL DIARY OF THE WEEK.

**Monday**, 9, A.M., Massachusetts General Hospital, Med. Clinic. 9, A.M., City Hospital, Ophthalmic Clinic.
**Tuesday**, 9, A.M., City Hospital, Medical Clinic, 10, A.M., Surgical Lecture. 9 to 11, A.M., Boston Dispensary. 9–11, A.M., Massachusetts Eye and Ear Infirmary.
**Wednesday**, 10, A.M., Massachusetts General Hospital, Surgical Visit. 11 A.M., OPERATIONS.
**Thursday**, 9 A.M., Massachusetts General Hospital, Medical Clinic. 10, A.M., Surgical Lecture.
**Friday**, 9, A.M., City Hospital, Ophthalmic Clinic; 10, A.M., Surgical Visit; 11, A.M., OPERATIONS. 9 to 11, A.M., Boston Dispensary.
**Saturday**, 10, A.M., Massachusetts General Hospital Surgical Visit; 11, A.M., OPERATIONS.

**To Correspondents.**—Communications accepted:—Intermittent Fever successfully treated by Iodide of Potassium, &c.—Review by N. F.—Watermelon *vs.* Diarrhœa, No. IV.—Bilateral Paralysis of Abductors of Vocal Chords.

**Books and Pamphlets Received.**—A Treatise on the Diseases and Surgery of the Mouth, Jaws and associate Parts. By James E. Garretson, M.D., D.D.S. Philadelphia: J. B. Lippincott & Co.—The Ninth Annual Publication of the Massachusetts Eclectic Medical Society, for the year ending June 4, 1869. Pp. 56.—Rules for the course to be followed by the By-standers in case of Injury by Machinery, when Surgical Assistance cannot at once be obtained. Prepared by John H. Packard, M.D., Philadelphia, Pa. (Chart.)—A Pseudo-Critic unmasked in a Review of the Writings of E. S. Gaillard, M.D., Ex-Professor of three Medical Schools. By T. S. Bell, M.D., Professor of the Science and Practice of Medicine in the Medical Department of the University of Louisville, Ky. Pp. 36.—Transactions of the Medical Society of the State of Pennsylvania, at its Twentieth Annual Session, held at Erie, June, 1869. Pp. 312.

**Married,**—At Providence, R. I., Frank W. Brigham, M.D., of Shrewsbury, Mass., to Miss Alice R. Bates, of Providence.

**Died,**—In this city, 15th inst., Francis Codman Ropes, M.D., 31.—19th inst., Solomon D. Townsend, M.D., 76.—At Deerfield, N. H., 18th inst., Dr. Israel Gale, 70.

**Deaths in Boston** for the week ending September 18, 120. Males, 64—Females, 56.—Accident, 4—anæmia, 1—congestion of the brain, 2—disease of the brain, 3—cancer, 1—cholera infantum, 21—cholera morbus, 1—consumption, 20—convulsions, 2—croup, 4—debility, 1—diarrhœa, 6—dropsy, 2—dropsy of the brain, 1—dysentery, 1—encephalocele, 1—epilepsy, 1—erysipelas, 1—scarlet fever, 1—typhoid fever, 4—disease of the heart, 7—infantile disease, 4—intemperance, 1—disease of the kidneys, 1—disease of the liver, 1—inflammation of the lungs, 6—marasmus, 8—neuralgia, 1—old age, 2—paralysis, 1—premature birth, 4—puerperal disease, 1—scrofula, 1—tetanus, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 64—between 5 and 20 years, 5—between 20 and 40 years, 26—between 40 and 60 years, 13—above 60 years, 12. Born in the United States, 90—Ireland, 17—other places, 11.